

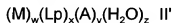
AMENDMENTS TO THE CLAIMS

Please amend claims 1, 12, and 14-15 as follows:

1. (currently amended) A The method of increasing the bioavailability of mineral salts which comprises combining said salts and α -lipoic acid or α -dihydrolipoic acid.
12. (currently amended) A method of providing improving cosmetic formulations which comprises adding to said formulations an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.
14. (currently amended) A method of providing improving drugs that are used to treat disorders in which lipoic acid has a therapeutic or prophylactic effect and in which there is a mineral salt deficiency which comprises adding to said drugs an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.
15. (currently amended) A method of providing improving compositions for treating diabetes, tumors, HIV infections, AIDS, renal insufficiency, malnutrition, protein-energy malnutrition and mineral deficiencies which comprises adding to said compositions the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.

Please enter new claims 18 through 22, which read as follows:

18. (new) A composition comprising (R)- α -lipoic acid or (S)- α -lipoic acid and at least one mineral salt selected from the group consisting of Fe, Cr, Co and Mn salts.
19. (new) A metal α -lipoate, metal α -dihydrolipoate or metal- α -lipoic acid complex of the formula II',



where

M is a metal cation selected from the group consisting of cations of Fe, Cr, Co and Mn,

Lp is racemic α -lipoic acid or α -dihydrolipoic acid, (R)- or (S)- α -lipoic acid or (R)- or (S)- α -dihydrolipoic acid, racemic α -lipoate or dihydro- α -lipoate or (R)- or (S)- α -lipoate or (R)- or (S)-dihydro- α -lipoate,

A is a physiologically acceptable monovalent or divalent anion,

w is 1 or 2,

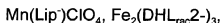
x is 1, 2, 3 or 4,

y is 0, 1, 2 or 3 and

z is 0, 1, 2, 3, 4, 5 or 6,

where the subscripts w, x and y correspond to the valency and charge equalization and

the following compounds are excluded:



where

Lip^- is monovalent negative racemic or (R)- or (S)- α -lipoate,

$\text{Lip}_{\text{rac}}^-$ is monovalent negative racemic α -lipoate,

Lip_{rac} is racemic α -lipoic acid and

$\text{DHL}_{\text{rac}}^{2-}$ — is divalent negative racemic α -dihydrolipoate.

20. (new) A composition comprising metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes as claimed in claim 19.
21. (new) The metal α -lipoate, metal α -dihydrolipoate or metal- α -lipoic acid complex defined in claim 5, wherein M is a metal cation selected from the group consisting of cations of Fe, Cr, Co and Mn.
22. (new) A composition comprising metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes as in claim 21 and α -lipoic acid or α -dihydrolipoic acid.

COPY OF ALL CLAIMS

1. (currently amended) A method of increasing the bioavailability of mineral salts which comprises combining said salts and α -lipoic acid or α -dihydrolipoic acid.
2. (previously amended) The method of claim 1, wherein at least one mineral salt is combined with α -lipoic acid or α -dihydrolipoic acid.
3. (previously amended) The method of claim 2, wherein the mineral salts have the formula I,
$$(M)_n(B)_m \quad I$$
where
M is a monovalent to trivalent physiologically acceptable metal cation,
B is a monovalent to trivalent physiologically acceptable anion,
n is 1, 2 or 3 and
m is 1, 2 or 3,
where the subscripts n and m correspond to the valency and charge equalization of the mineral salt of the formula I.
4. (previously amended) The method of claim 1, wherein the combination is metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes.
5. (previously amended) The method of claim 4, wherein the combination is metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes of the formula II,
$$(M)_w(Lp)_x(A)_y(H_2O)_z \quad II$$
where
M is a monovalent to trivalent physiologically acceptable metal cation or a mixture of monovalent to trivalent physiologically acceptable metal cations,
Lp is racemic α -lipoic acid or α -dihydrolipoic acid, (R)- or (S)- α -lipoic acid or (R)- or (S)- α -dihydrolipoic acid, racemic α -lipoate or dihydro- α -lipoate or (R)- or (S)- α -lipoate or (R)- or (S)-dihydro- α -lipoate,
A is a physiologically acceptable monovalent or divalent anion,
w is 1 or 2
x is 1, 2, 3 or 4,
y is 0, 1, 2 or 3 and
z is 0, 1, 2, 3, 4, 5 or 6,
where the subscripts w, x and y correspond to the valency and charge equalization of the compound of the formula II.
6. (previously amended) The method of claim 1, wherein the α -lipoic acid is (R)- α -lipoic acid or the α -lipoate used is (R)- α -lipoate.

7-10. (canceled)

11. (previously amended) A method of increasing the bioavailability of mineral salts in feedstuff or food supplements which comprises adding to said feedstuff or food supplements an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.

12. (previously amended) A method of providing cosmetic formulations which comprises adding to said formulations an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.

13. (canceled)

14. (previously amended) A method of providing drugs that are used to treat disorders in which lipoic acid has a therapeutic or prophylactic effect and in which there is a mineral salt deficiency which comprises adding to said drugs an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.

15. (previously amended) A method of providing compositions for treating diabetes, tumors, HIV infections, AIDS, renal insufficiency, malnutrition, protein-energy malnutrition and mineral deficiencies which comprises adding to said compositions the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes as defined in claim 5.

16. (previously added) The method of claim 1, wherein the mineral salts are selected from the group consisting of Fe, Cr, Co and Mn salts.

17. (previously added) The method of claim 5 wherein M is a metal cation selected from the group consisting of cations of Fe, Cr, Co and Mn.

18. (new) A composition comprising (R)- α -lipoic acid or (S)- α -lipoic acid and at least one mineral salt selected from the group consisting of Fe, Cr, Co and Mn salts.

19. (new) A metal α -lipoate, metal α -dihydrolipoate or metal- α -lipoic acid complex of the formula II',
 $(M)_m(Lp)_x(A)_y(H_2O)_z$ II'
where

M is a metal cation selected from the group consisting of cations of Fe, Cr, Co and Mn,

Lp is racemic α -lipoic acid or α -dihydrolipoic acid, (R)- or (S)- α -lipoic acid or (R)- or (S)- α -dihydrolipoic acid, racemic α -lipoate or dihydro- α -lipoate or

(R)- or (S)- α -lipoate or (R)- or (S)-dihydro- α -lipoate,
A is a physiologically acceptable monovalent or divalent anion,
w is 1 or 2,
x is 1, 2, 3 or 4,
y is 0, 1, 2 or 3 and
z is 0, 1, 2, 3, 4, 5 or 6,

where the subscripts w, x and y correspond to the valency and charge equalization and

the following compounds are excluded:

$\text{Mn}(\text{Lip}^-)\text{ClO}_4$, $\text{Fe}_2(\text{DHL}_{\text{rac}}2^-)_3$,

where

Lip^- is monovalent negative racemic or (R)- or (S)- α -lipoate,

$\text{Lip}_{\text{rac}}^-$ is monovalent negative racemic α -lipoate,

Lip_{rac} is racemic α -lipoic acid and

$\text{DHL}_{\text{rac}}2^-$ is divalent negative racemic α -dihydrolipoate.

20. (new) A composition comprising metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes as claimed in claim 19.
21. (new) The metal α -lipoate, metal α -dihydrolipoate or metal- α -lipoic acid complex defined in claim 5, wherein M is a metal cation selected from the group consisting of cations of Fe, Cr, Co and Mn.
22. (new) A composition comprising metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes as in claim 21 and α -lipoic acid or α -dihydrolipoic acid.